

Scientific Landscape around CTAO-LSTs

Masahiro Teshima for the CTAO Consortium and CTAO LST Collaboration

*Max Planck Institute for Physics, Munich, Germany
Institute for Cosmic Ray Research, The University of Tokyo, Japan*

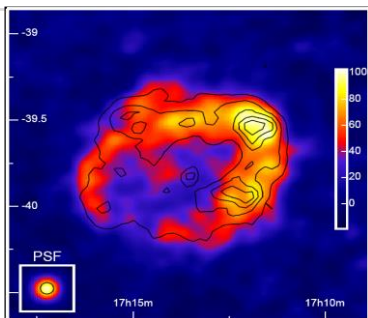


The science of CTAO is very wide

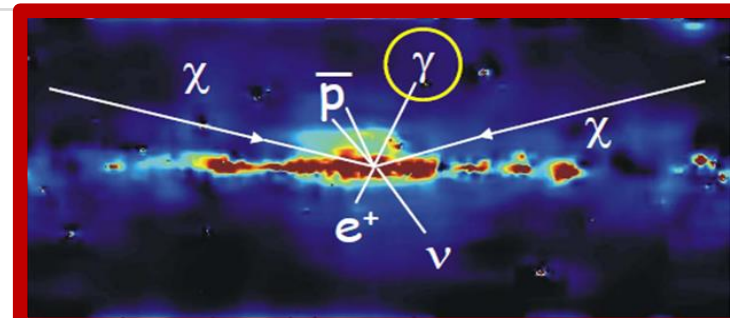
CTAO-LST will cover **S.M.B.H., Dark Matter, AGNs, GRBs, etc.**



Cosmic Ray Origin



Super Massive
Black Holes



Dark Matter Physics

- Origin of Cosmic Rays (Big accelerators)
- Black Hole and S.M.B.H.
- Dark Matter Search

Extragalactic Sources



Active Galactic Nuclei

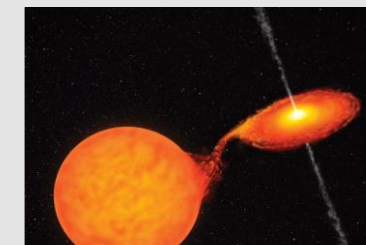


Gamma Ray Bursts

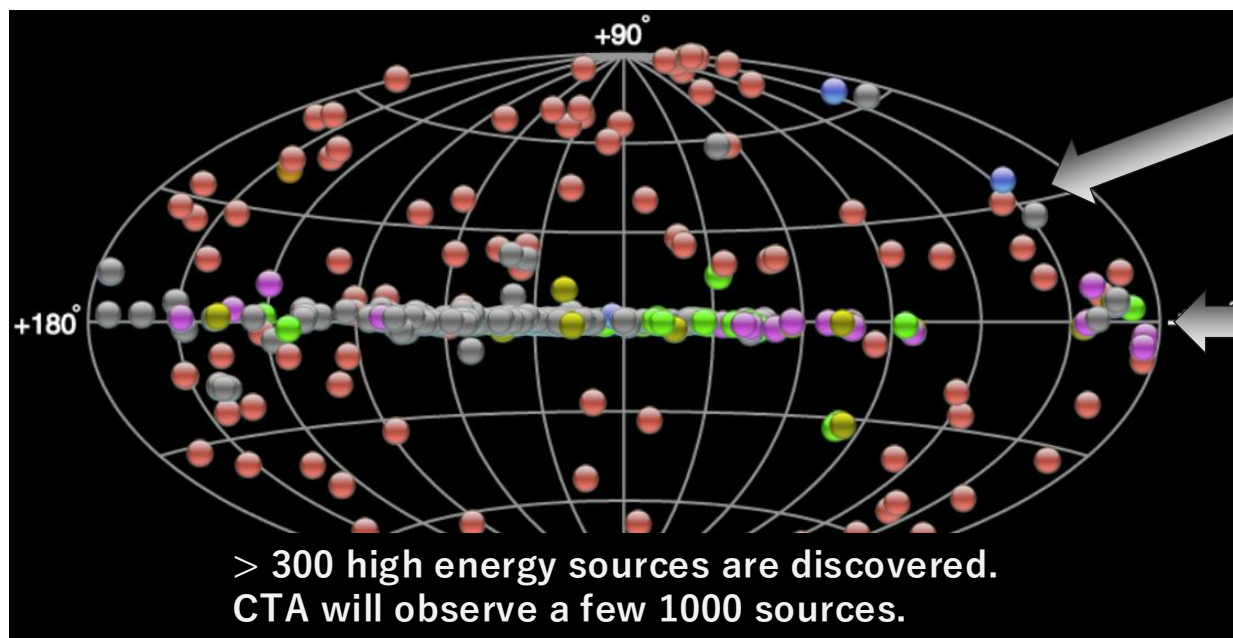
Galactic Sources



Super Nova Remnants



Binaries



Multi-messenger and Multi-wavelength Astrophysics

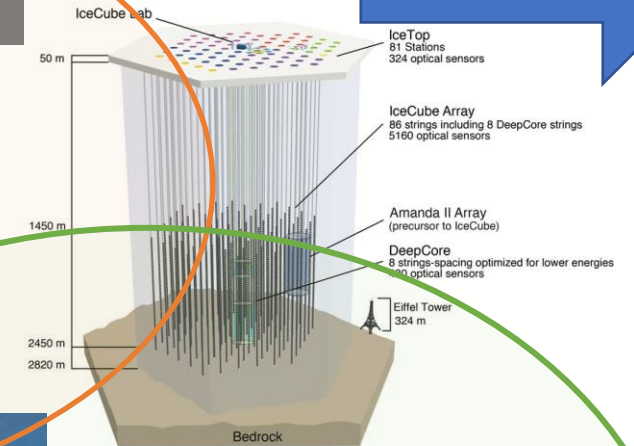
MM & MW
AstroPhysics



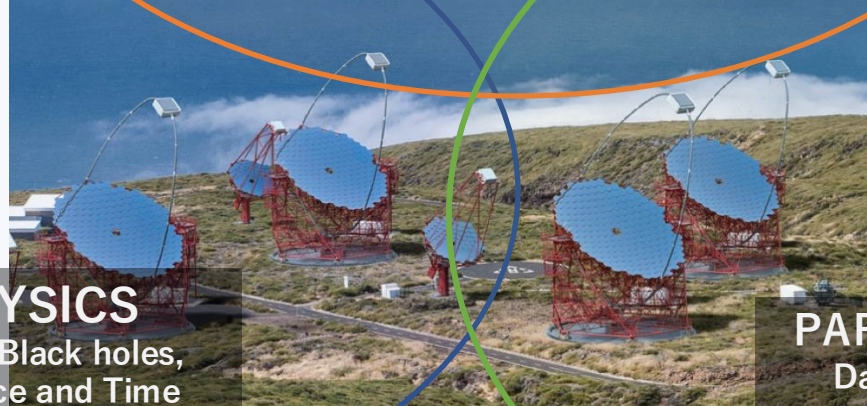
ASTRO-PARTICLE PHYSICS
Cosmic Ray Physics
High Energy Astrophysics



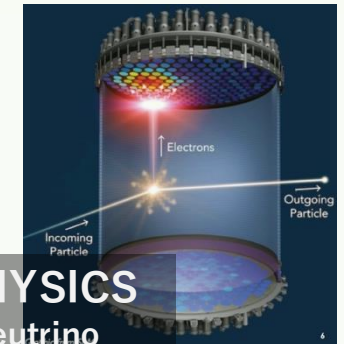
Particle Physics



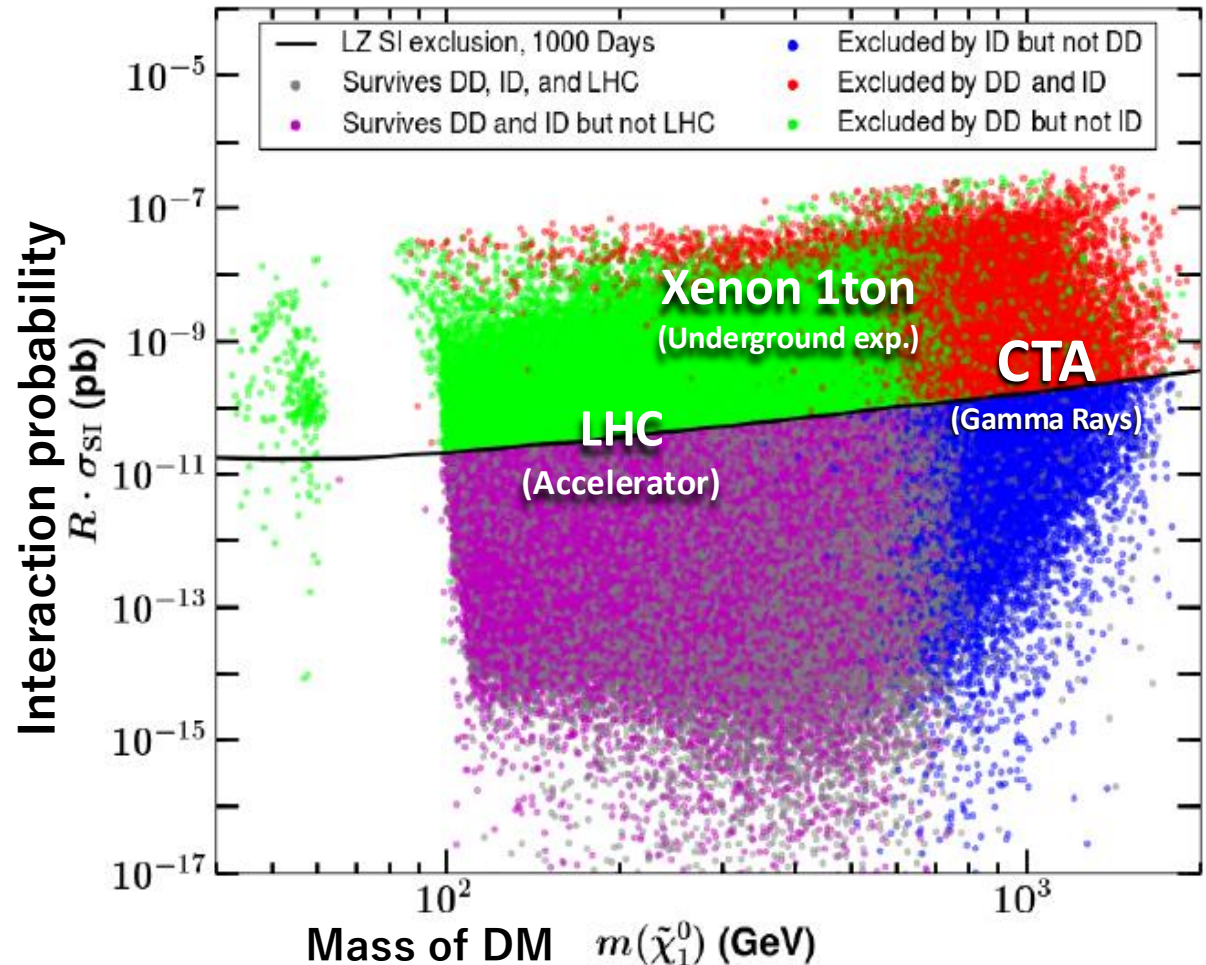
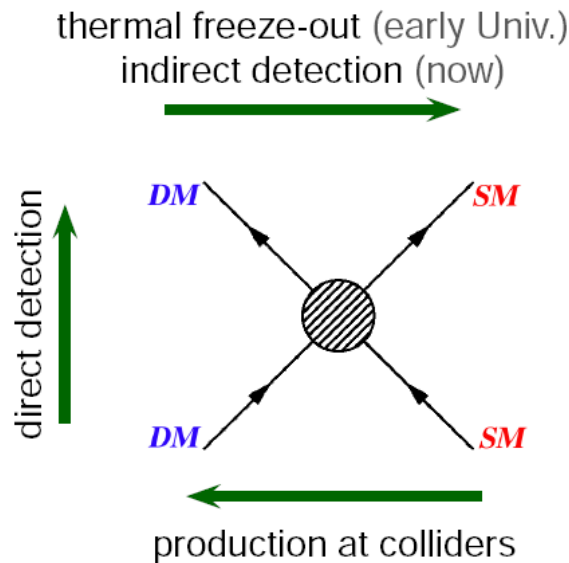
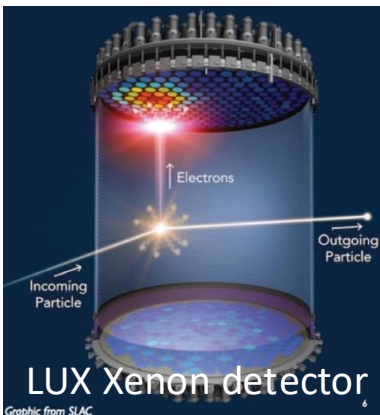
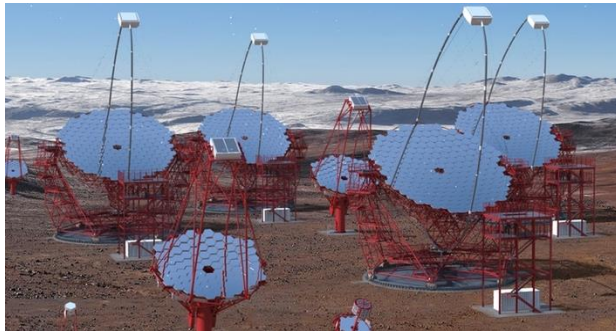
ASTRO-PHYSICS
Gamma Ray Bursts, Black holes,
Neutron Stars, Space and Time



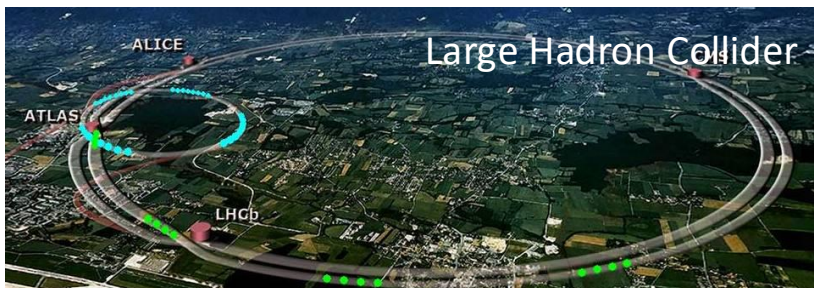
PARTICLE PHYSICS
Dark Matter, Neutrino
Energy Frontier



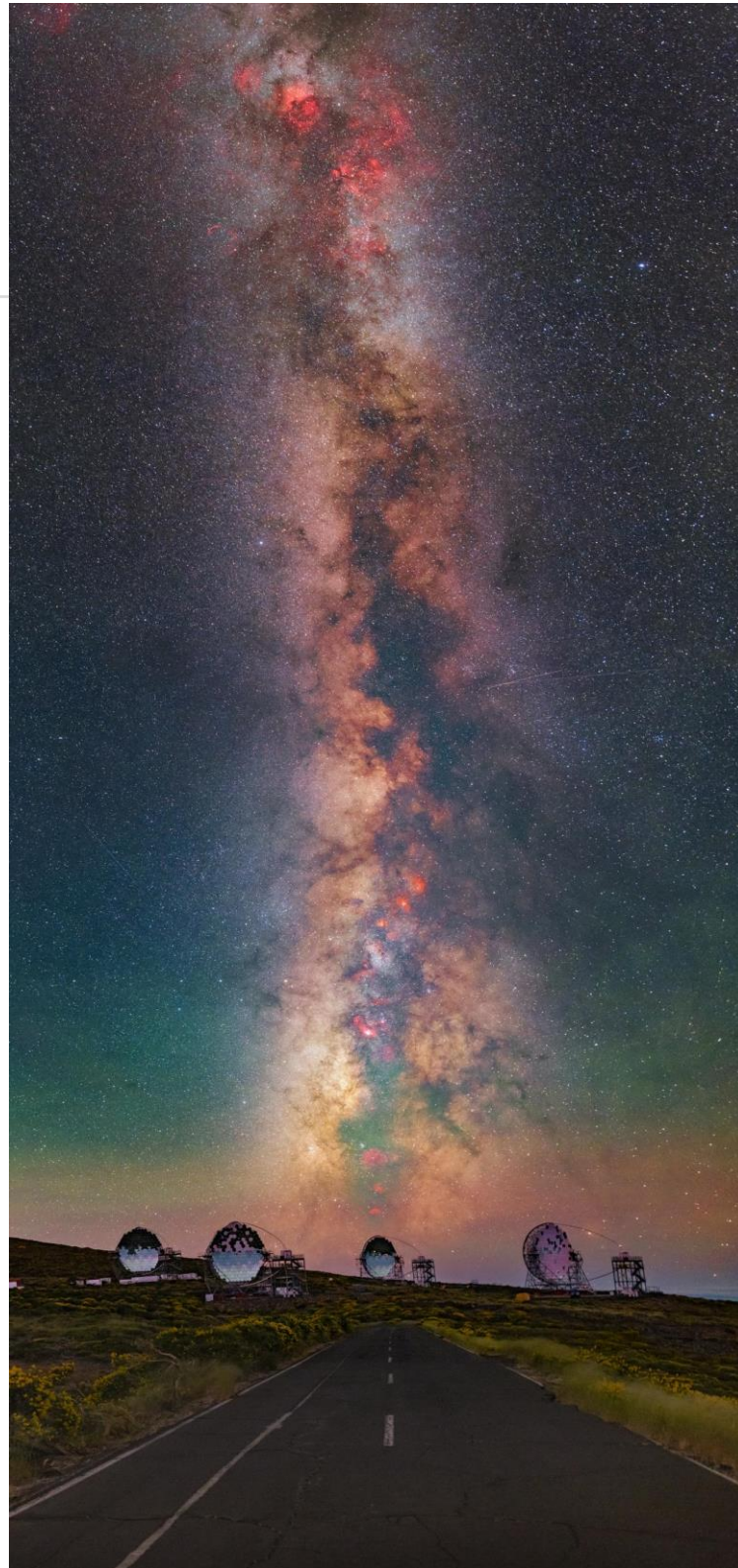
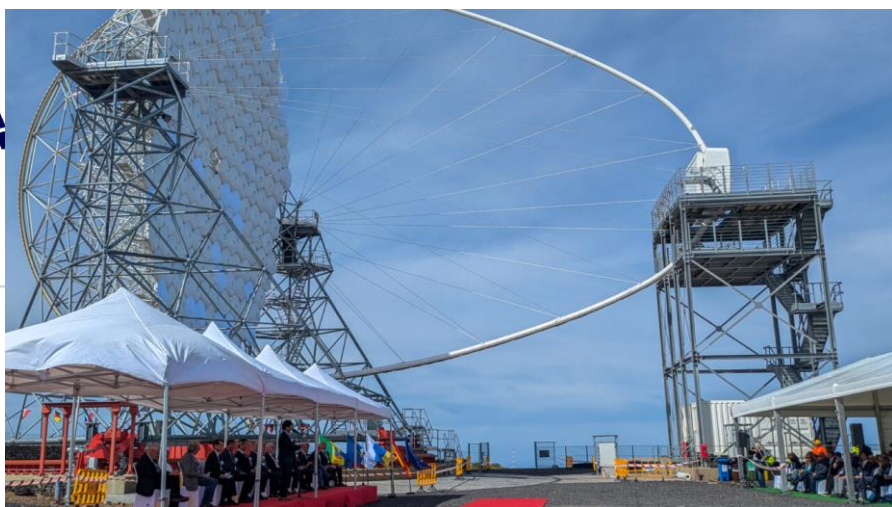
Complementarity of different approaches Direct, Indirect, and Collider Experiment



- Explore Dark Matter in the Galactic Center and Dwarf Sph. Galaxies
- **CTA has the best sensitivity above several 100GeV**
- **LST North has a good sensitivity with LZA technique**



CTA





The New Wave is coming from South

HIC MANEBIMUS OPTIME



Courtesy: Lucio Angelo Antonelli